Amendments to the Claims:

Claim 1 (Currently Amended): An apparatus for controlling a trip point that eliminates external resistor tolerance; comprising:

a resistor-to-digital circuit configured to generate a digital code relating to an external resistor and configured to output a trip signal to a first node relating to the digital code; wherein the resistor-to-digital circuit further comprises a number of resistors and comparators that correspond to a desired number of zones;

a temperature sensor configured to measure a temperature and output a temperature signal to the first node; and

a comparator coupled to the first node and configured to determine when the trip point is tripped.

Claim 2 (original): The apparatus of Claim 1, wherein the resistor-to-digital circuit further comprises a DAC configured to receive the digital code, and in response, output the trip signal.

Claim 3 (original): The apparatus of Claim 1, wherein the resistor-to-digital circuit wherein the comparators are configured to drive current switches that are arranged to generate the trip signal.

Claim 4 (original): The apparatus of Claim 1, wherein the resistor-to-digital circuit further comprises a gray code.

Claim 5 (original): The apparatus of Claim 1, wherein the resistor-to-digital circuit further comprises a thermometer code.

Claim 6 (canceled).

Claim 7 (Currently Amended): The apparatus of Claim 16, wherein the number of resistors and comparators is approximately equal to the number of zones minus one.

Claim 8 (Currently Amended): The apparatus of Claim 16, wherein the external resistor is coupled to at least one of a current source and a voltage source and is configured to provide a signal to an input of each of the comparators.

Claim 9 (original): The apparatus of Claim 8, wherein the number of resistors is coupled to at least one of a current source and a voltage source and is configured to generate signals for each zone, and wherein another input of each of the comparators is coupled to each respective zone.

Claim 10 (original): The apparatus of Claim 9, further comprising an encoder coupled to the comparators and configured to produce a digital code.

Claim 11 (original): The apparatus of Claim 1, wherein the external resistor is selected from at least one predefined resistor.

Claim 12 (original): The apparatus of Claim 11, wherein the at least one predefined resistor comprises a predefined resistor for each of the zones.

Claim 13 (original): A method for controlling a trip point associated with a circuit that eliminates external resistor tolerance, comprising:

determining external resistance;

converting the external resistance to a digital code using resistors and comparators associated with a desired number of zones;

setting the trip point;

measuring a temperature associated with the circuit; and

determining when the trip point has tripped.

Claim 14 (original): The method of Claim 13, further comprising performing a predetermined action when the trip point trips.

Claim 15 (original): The method of Claim 13, wherein converting the external resistance to a digital code further comprises using a DAC and an encoder.

Claim 16 (original): The method of Claim 13, wherein converting the external resistance to a digital code further comprises using at least one of a gray code and a thermometer code.

Claim 17 (original): The method of Claim 13, further comprising utilizing a graduated zoning assignment.

Claim 18 (original): An apparatus for controlling a trip point for a circuit that eliminates external resistor tolerance, comprising:

means for determining external resistance;

means for converting the external resistance to a digital code using resistors and comparators associated with a desired number of zones;

means for setting the trip point;

means for measuring a temperature associated with the circuit; and

means for determining when the trip point has tripped.

Claim 19 (original): The apparatus of Claim 18, further comprising means for performing a predetermined action when the trip point trips.